Oc2/module 5/988

Naval Education and Training Command

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Training Manual (TRAMAN) and Nonresident Training Course (NRTC)

Ocean Systems Technician 3 & 2 (Maintainer)

Module 5—Administration and Supply

DISTRIBUTION STATEMENT A: Approved for public release; distribution is unlimited.

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The terms training manual (TRAMAN) and nonresident training course (NRTC) are now the terms used to describe Navy nonresident training program materials. Specifically, a TRAMAN includes a rate training manual (RTM), officer text (OT), single subject training manual (SSTM), or modular single or multiple subject training manual (MODULE); and a NRTC includes nonresident career course (NRCC), officer correspondence course (OCC), enlisted correspondence course (ECC) or combination thereof.

Although the words "he," "him," and "his" are used sparingly in this manual to enhance communication, they are not intended to be gender driven nor to affront or discriminate against anyone reading this text.

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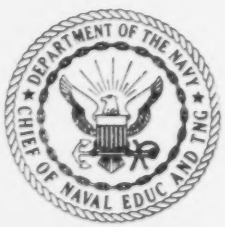
OCEAN SYSTEMS TECHNICIAN 3 & 2 (MAINTAINER)

MODULE 5
ADMINISTRATION AND SUPPLY

NAVEDTRA 062-05-45-88



1982 Edition Prepared by
OTC Fred C. Jaworsky

PREFACE

This Training Manual Module and Nonresident Training Course (NRTC) form a self-study package that will enable Ocean Systems Technicians to help themselves fulfill the requirements of their rating.

This Module is part of a series written for personnel who are specializing in the maintenance aspects of the Ocean Systems Technician (OT) rating.

Designed for individual study and not formal classroom instruction, this Module provides subject matter that relates directly to the occupational standards of the OT rating. The NRTC provides a way of satisfying the requirements for completing the Module. The assignment in the NRTC includes learning objectives and supporting questions designed to lead the student through the Module.

Special appreciation is expressed to Commander, Oceanographic System Atlantic, Commander, Oceanographic System Pacific, and the Fleet ASW Training Center Atlantic, for their contributions to the development of this module.

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THE UNITED STATES NAVY

GUARDIAN OF OUR COUNTRY

The United States Navy is responsible for maintaining control of the sea and is a ready force on watch at home and overseas, capable of strong action to preserve the peace or of instant offensive action to win in war.

It is upon the maintenance of this control that our country's glorious future depends; the United States Navy exists to make it so.

WE SERVE WITH HONOR

Tradition, valor, and victory are the Navy's heritage from the past. To these may be added dedication, discipline, and vigilance as the watchwords of the present and the future.

At home or on distant stations we serve with pride, confident in the respect of our country, our shipmates, and our families.

Our responsibilities sober us, our adversities strengthen us.

Service to God and Country is our special privilege. We serve with honor.

THE FUTURE OF THE NAVY

The Navy will always employ new weapons, new techniques, and greater power to protect and defend the United States on the sea, under the sea, and in the air.

Now and in the future, control of the sea gives the United States her greatest advantage for the maintenance of peace and for victory in war.

Mobility, surprise, dispersal, and offensive power are the keynotes of the new Navy. The roots of the Navy lie in a strong belief in the future, in continued dedication to our tasks, and in reflection on our heritage from the past.

Never have our opportunities and our responsibilities been greater.

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1. Electronics Organization and Administration 1-1

2. Supply 2-1

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Nonresident Training Course follows Index

The Training Manual for the Ocean Systems Technician 3 & 2 rating is developed in modular format by occupational speciality. The following list provides an outline of module contents.

ANALYST

Module 1—The OT Rating, NAVEDTRA 052-01-45-88

This module reviews the career paths available to "OT" personnel and security regulations applicable to the rating.

Module 2—Physics of Sound, NAVEDTRA 052-02-45-81

This module provides information about sound travel through water and its effect on Lofar detections.

Module 3—Analysis, NAVEDTRA 052-03-45-81

This module provides training in basic Lofar Analysis, origins of detectable sound sources, and propulsion systems and signatures.

Module 4—Subsurface Acoustic Characteristics, NAVEDTRA 052-04-45-84

This module provides specific information on acoustic contacts including sound sources and characteristics.

Module 5—Contact Handling, NAVEDTRA 052-05-45-83

This module describes methods of contact classification, plotting and positioning, and reporting requirements.

Module 6—Operator Maintenance, NAVEDTRA 052-06-45-82

This module provides information on the routine maintenance conducted by analysts on assigned equipments.

Module 7—Ocean Systems Equipment Operation, NAVEDTRA A52-07-45-86

This module provides information on the operational characteristics of the various Oceanographic subsystems.

MAINTAINER

Module 1—The OT Rating, NAVEDTRA 052-01-45-88

This module reviews the career paths available to "OT" personnel and security regulations applicable to the rating.

Module 2—General Maintenance, NAVEDTRA 062-02-45-88

This module provides information on the use of publications, station drawings, schematics, modular construction, and soldering.

Module 3—Equipment Maintenance, NAVEDTRA 062-03-45-82

This module provides information on the various AN/FQQ front ends, a walk through of a typical system, special purpose test equipment, Recorder/Reproducer AN/USH-32(V), and PMS.

Module 4—Ocean Systems Computers, Processors, and Peripheral Equipment, NAVEDTRA 062-04-45-86

This module provides information on the technical and operational characteristics of both government-furnished and contractor-furnished equipment.

Module 5—Administration and Supply, NAVEDTRA 062-05-45-88

This module provides information on electronics administration and supply. The administration portion covers maintenance of logs and records, and the relationship of a typical organization at the division level. The supply portion describes ordering of parts, inventory of equipment, and COSBAL.

Module 6—Oceanographic Subsystems, NAVEDTRA A62-06-45-86

This module provides information on the technical characteristics and equipment configuration of various Oceanographic subsystems.

PART 1

ELECTRONICS ORGANIZATION AND ADMINISTRATION

Take a few moments to look around your duty station. You will notice that each person is working at an assigned task, supplies are arriving, a certain piece of equipment may be out of service while planned maintenance is being performed, and a group of personnel may be involved in a training lecture. Another aspect that you will see around you is the organization of your duty station. Each person is assigned a task as part of a team. All in all, you will find that your duty station is a combination of highly skilled personnel organized into teams that operate sophisticated equipment in order to carry out the mission of your command.

This module part will provide you with a basic understanding of Navy organization and how this organization relates to the Electronics Maintenance Division.

NAVAL ORGANIZATION

Organization is the process by which jobs are divided into groups and assigned to individuals, authority and responsibility are established, and relationships between individuals are determined.

The Navy is organized into levels of authority to form a chain of command. The structure of this chain of command at the higher levels of authority within the Navy is as shown in figure 1-1. This chain of command concept continues down to each command and to each division as shown in figure 1-2.

Due to the differences in size and the assigned mission of each Naval Facility (NAVFAC), there is no standard organizational structure of departments and divisions. For example, at some NAVFACs, the Electronic Maintenance Division comes under the authority of the Operations Department, while at another NAVFAC it may come under the Maintenance and Supply Department. The organization of the Electronics Maintenance Division within each command is arranged to best meet the maintenance needs of that command.

THE ELECTRONICS MAINTENANCE DIVISION

Figure 1-3 shows the organization of a typical electronics maintenance division. Due to differences in the number of personnel assigned and the amount of equipment to be maintained, some of the positions indicated in figure 1-3 may not be necessary or the responsibility of two positions may be assigned to one person.

The following paragraphs will provide information on the general duties of each position. Local command instructions will provide information on the specific duties assigned to each position.

Electronics Material Officer (EMO)/Division Officer

At most facilities, the Electronic Maintenance Division Officer and the EMO are the same person. The EMO is responsible for the readiness of all assigned electronic equipment, for administration of the electronic material maintenance program, for technical maintenance, and for repair of electronic equipment. As the division officer, he is responsible for the proper performance of duties assigned to the division and for the conduct, training, and welfare and morale of assigned personnel.

Leading Chief Petty Officer (LCPO)

The LCPO works directly with the division officer and provides assistance in the administration of the division. After determining the needs of the division with the division officer, the LCPO assigns division personnel to specific duties. Division personnel work for and report to the LCPO

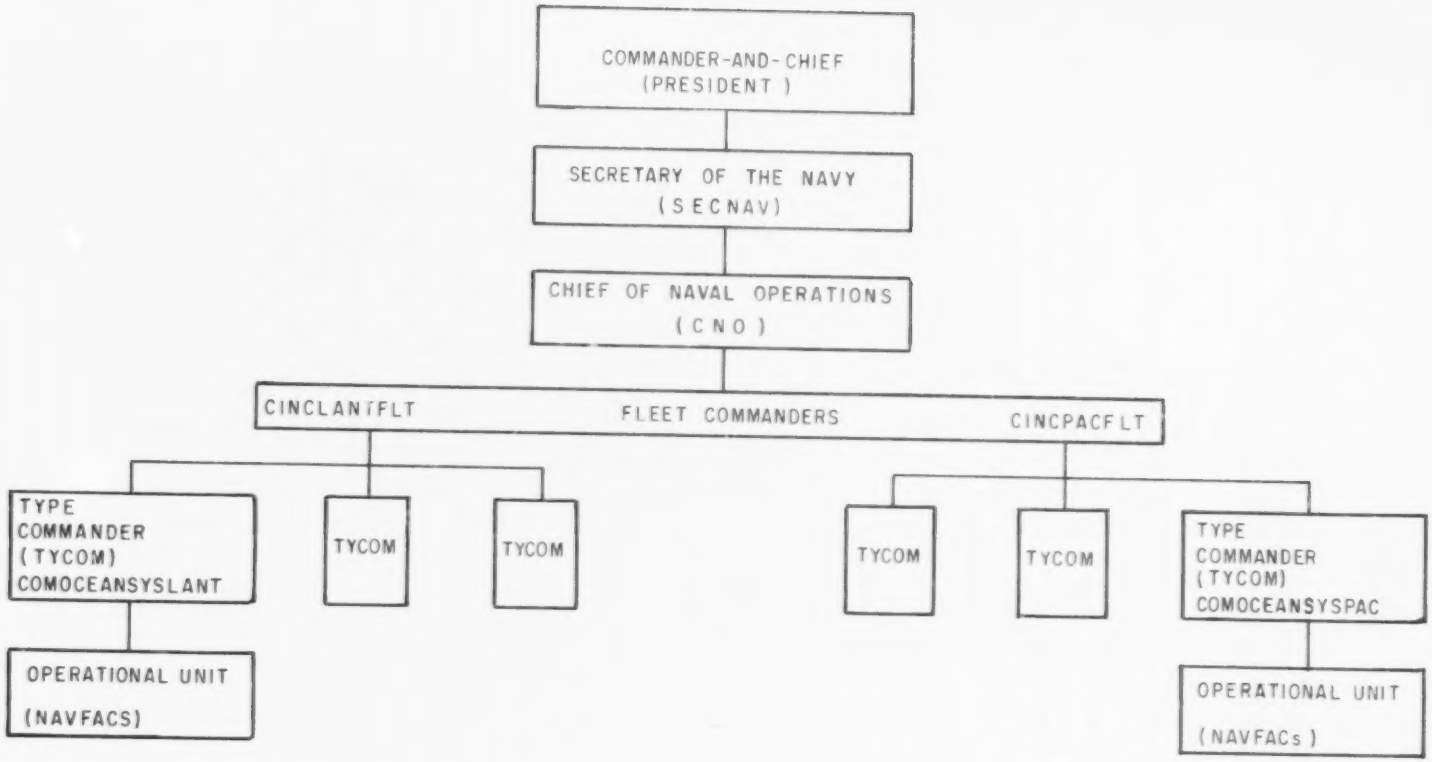

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Figure 1-1.—Navy Organization.

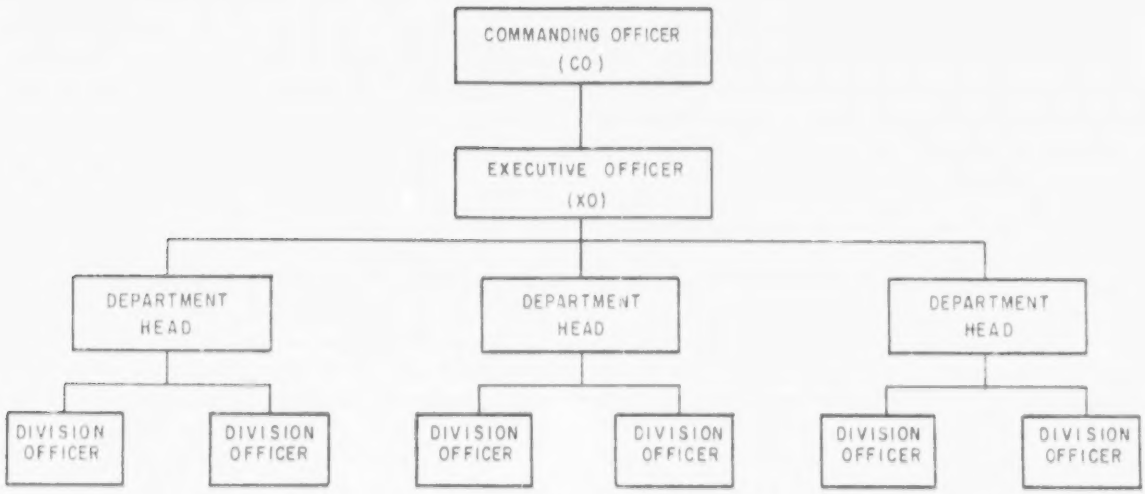

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Figure 1-2.--Operational unit Chain of Command.

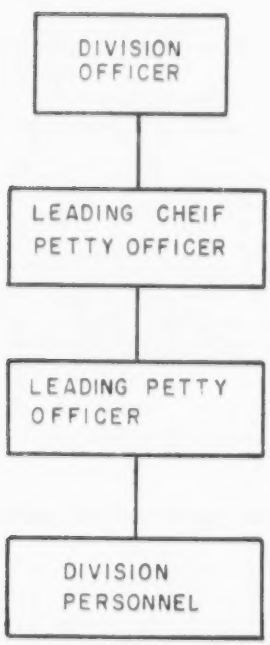

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Figure 1-3.—Division Organization.

through supervisors at each work unit. The LCPO reports to the division officer.

Leading Petty Officer (LPO)

The position of LPO is assigned by the LCPO. The LPO is an assistant to the LCPO and a supervisor in the division. At smaller commands, the LPO may perform the duties of the LCPO. The specific duties of the LPO will vary at each command.

Division Personnel

Division personnel are assigned to specific duties by supervisory personnel within the division. Examples of tasks to be carried out by division personnel are: performance of preventive and corrective maintenance, cleaning assignments, and administrative duties.

MAINTENANCE AND MATERIAL MANAGEMENT (3-M)

The primary objective of the 3-M system is to provide for management of maintenance and maintenance support in a manner which will ensure maximum equipment operational readiness. The Planned Maintenance System (PMS) and Maintenance Data System (MDS) are part of the

3-M system at each NAVFAC. The 3-M system represents a slightly different organization within each command than has so far been described.

Figure 1-4 is the typical organization of a command as it applies to the 3-M system. Notice the addition of the 3-M coordinator. The command 3-M coordinator reports to the executive officer and is responsible for the coordination and direct supervision of all administrative aspects of the command 3-M program. The most significant difference is the organizational arrangement of the division.

The typical maintenance division is responsible for the maintenance of several different electronic systems. Examples of systems to be maintained are: communications, test equipment, FQQ equipment, and Improved SOSUS Equipment (ISE). In order to provide a more effective administration of the 3-M system, the maintenance division is divided into work centers assigned to maintain specific systems. Normally, the LCPO is the group supervisor and will assign a petty officer as work center supervisor for each work center.

Each work center supervisor is responsible for proper maintenance and documentation, and for ordering of repair parts to maintain assigned equipment.

Maintenance personnel are responsible to the work center supervisor. They are responsible for reading the weekly schedule and performing assigned maintenance in accordance with Maintenance Requirement Cards (MRCs) and Equipment Guide Lists (EGLs). Maintenance personnel inform the work center supervisor if any problems are encountered, if corrective maintenance is required, or of situations that require documentation.

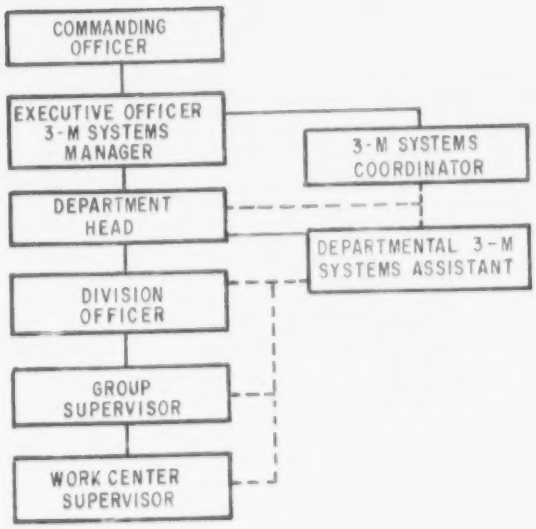

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Figure 1-4.—Command 3-M Organization.

ADMINISTRATIVE ASSIGNMENTS

Again, depending on the size of the division and the amount of equipment to be maintained, division personnel may be assigned to administrative duties. Examples of this type of assignment are duties as supply petty officer or records petty officer.

Supply Petty Officer

A supply petty officer is required to procure and maintain a stock of those items needed by the division, and to maintain appropriate records. Details of supply functions are provided in part 2 of this module.

Records Petty Officer

An electronics maintenance division must establish and maintain a variety of administrative materials. Examples include maintenance of a technical library, station drawings, and files of reference material. The general guidelines for proper maintenance of technical publications and station drawings were presented in module 2.

GENERAL ADMINISTRATIVE DUTIES

When you are assigned to administrative duties, you will be required to have a variety of skills. For instance, you must know how to use and care for office equipment, how to maintain logs and records, and how to maintain a filing system.

OFFICE MACHINES

The two most common pieces of office equipment are typewriters and duplicating machines.

These machines play an important part in administrative support and must be properly used and maintained. The best source of information for proper operation and maintenance is provided in the manufacturer's instruction book.

FILES AND RECORDS

Files and records are maintained to provide a source of information for future reference. If the information is to be of any use, it must be easy to locate when it is needed.

A filing system is used when information is stored on cards or in folders. Examples of this type of information would be messages for a specific subject or correspondence and documents for a specific project.

When information is stored in a folder, the folder should be properly labeled to indicate the contents. The folder should also be appropriately marked with the highest security classification of the contents.

Generally, folders are stored in four- or five-drawer steel, letter-size cabinets. The type of cabinet that is used must meet the security requirements for the classification of the material being stored. When a large amount of material is stored, an index or cross reference system may also be needed.

The actual system of filing will depend on the needs of each division or office. Most systems will provide a method of indexing or cross-referencing. Indexing may be done by listing all files on a record form. The record will then be kept separately as a guide for locating a folder. Another method may be to use an index by subject area to provide a cross-reference. No matter what system is used, it must provide a way of finding the material desired.

Records are generally kept in a record book or log. The format of a record or log will depend on the information to be recorded or logged.

When a log or record is required by higher authority, the format of the log or record may be specified in the instruction that establishes the requirement. An example of this case would be the Job Sequence Number Log (JSNL). The requirement and format for this log is specified in OPNAVINST 4790.4.

If you are required to start a log, begin by listing all the pertinent information that will be recorded. Consider the information and how it should be listed. This is most easily accomplished by starting with key information that will be used to reference each entry. The record should then provide ample space for each entry to be made and headings to easily identify the information.

SUMMARY

When you report aboard, you will be scheduled to attend an indoctrination which will provide you with information about the administration and organization of your command. When you check into your division, you will be informed of who is responsible for what, who you will be working for, and the duties you will be assigned. This module part has provided you with a basic understanding of Navy organization and administration and how it relates to you.

PART 2

SUPPLY

One aspect of your job as an Ocean Systems Technician (Maintainer) is to repair electronic equipment that is not operating properly. Once you have identified a circuit component to be at fault, you will need to identify the faulty part by the identification number and complete the necessary supply documentation to acquire a replacement part.

This module part will present the aspects of equipment support and how to identify and order replacement parts.

GENERAL EQUIPMENT CATEGORIES

There are two general categories of electronic equipment, Contractor Furnished Equipment (CFE) and Government Furnished Equipment (GFE). CFEs are hardware units that have been designed, built, reconfigured, or modified by a prime contractor for use in a specific subsystem. GFEs are hardware units procured by the government and provided to a prime contractor for integration into a specific subsystem and which become a combination of CFE and GFE. GFEs can also be hardware that is configured and integrated into a subsystem by a Government agency acting as prime contractor.

Equipments used in SOSUS that are not supported by the Navy Supply System are referred to as SOSUS-peculiar equipments. Equipments that are supported by the Navy Supply System are referred to as standard Navy equipments.

Navy/Defense Logistics Agency supply channels are used for all supply support, for repair/overhaul, and for replenishment of standard stock numbered items in accordance with normal supply procedures.

EQUIPMENT SUPPORT

Logistic support for electronic equipment is conducted in two phases. The first phase involves the development, installation, and interim support of a new system or subsystem, and for personnel training. The three primary commands involved in this phase are shown in figure 2-1. The Chief of Naval Operations (CNO) has ultimate authority and details responsibility to Op-24, who performs as resource sponsor. Op-24 tasks the Space and Naval Warfare Systems Command (SPAWARSYSCOM) with coordinating the development, installation, interim support, and training. PMW-180-1 is the office within SPAWARSYSCOM that carries out this task.

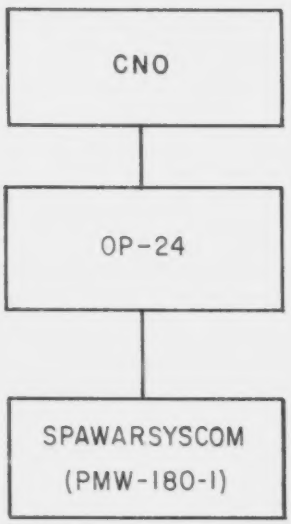

Figure 2-1.—Organizational chain of command for equipment support.

The second phase is the normal supply channels established to provide continuing support after the installation phase has been completed.

SOURCES OF SUPPORT

There are two main sources of logistic support for electronic equipment. If the equipment is

supported by the Navy Supply System, normal supply channels are used to obtain repair parts.

New installations that are not yet supported by the Navy Supply System are supported in the following manner. When a new system is installed, an initial amount of repair parts are provided. When they are needed, repair parts are procured from the Navy Supply System if available, but if they are not, they can be ordered from the Naval Electronics Systems Engineering Activity (NESEA). NESEA provides interim support until Navy supply support is established.

COSAL

The Coordinated Shorebased Allowance List (COSAL) is a document produced by Ships Parts Control Center (SPCC). This document is also referred to as the COSBAL. For the discussion that follows, we will use the term COSAL, but keep in mind that COSAL and COSBAL are basically the same document, and any instruction that applies to COSAL also applies to COSBAL.

The COSAL is a document prepared for individual shore activities which lists the equipment and components required for the activity to perform its operational assignments. It also provides a list of the repair parts, the special tools required for the operation, overhaul, and repair of the equipments, and the miscellaneous portable items necessary for upkeep.

The COSAL is both a supply document and a technical document. Supply information in the COSAL includes a list of all repair parts necessary to maintain the equipment. Technical information includes nomenclature, operational characteristics, and a listing of applicable technical manuals.

The key word in COSAL is COORDINATED. Computers assemble all of the allowable parts from hundreds of Allowance Parts Lists (APLs) and Allowance Equipage Lists (AELs) into lists of repair parts to be stocked by the activity. The preparation of these lists takes into account all of the installed equipment, the failure rate of parts, and the relative importance of each part to the operation of the equipment.

The COSAL is produced in three parts as described in the following paragraphs. In the figures that follow, you will find many abbreviations. This text will cover only the most significant information within each part. If you desire more information about the COSAL, you will find a complete breakdown in the introduction portion of the COSAL at your command.

COSAL, PART I

Part I of the COSAL begins with the Summary of Effective Allowance Parts/Equipage Lists (SOEAPL). The SOEAPL is a list of all the APLs and AELs that are contained in part II of the COSAL. Figure 2-2 is a sample page from a SOEAPL. The identification numbers found in the SOEAPL are in the same sequence in which the APLs and AELs are arranged in part II. Notice that the identification number 33053236 has been added to the SOEAPL in figure 2-2. As new APLs and AELs are received, they should be added to part II and all other sections should be updated.

There are five indices to the SOEAPL. These indices are as follows:

Section A	Equipment Nomenclature Sequence
Section B	Service Application Sequence
Section C	APL/AEL to Equipment Identification Code to Work Breakdown Structure Code
Section D	Equipment Identification Code to APL/AEL
Section E	Work Breakdown Code to APL/AEL

The main sections that you will use are Sections A and B. Sections A and B contain the same information but the columns are arranged differently. In Section A, the information is listed alphanumerically by equipment nomenclature. In Section B the same information is listed by service application. These sections can be used to locate the APL/AEL identification numbers. An example of these sections is shown in figures 2-3 and 2-4.

COSAL, PART II

Part II of the COSAL is composed of all the APLs and AELs listed in the SOEAPL. Figure 2-5 is an example of an APL. The APL provides the reference symbol number which is a designation, other than a stock number, by which a part

SUMMARY OF EFFECTIVE ALLOWANCE PARTS/EQUIPAGE LISTS

EQUIPMENT/COMPONENT/EQUIPAGE IDENTIFICATION NUMBERS

06008600PD	54819644CL	58617811	61628099	62689384	62773661	62773707	62773756
30043302	54925621CL	58617812	61628100	62713360TC	62773662SA	62773708PA	62773757
32465542	55030100	58619800PB	61641400	62772868	62773665	62773709PA	62773758
32848008S0	56619700	58627001	61641405	62772905	62773668	62773710PA	62773760PA
32848021SA	56731001	58627082	61762535	62772931	62773685	62773711PA	62773761PA
32848176	56731018	58627092	61765600	62772932	62773687PA	62773712PA	62773762PA
32848271SA	571014C0CL	61259301	61855010	62772946	62773688PB	62773714PA	62773763PA
33053236 37099800	58138242	61399730	61855010SA	62772947	62773689PA	62773714PB	62773773
38000971	58138243	61510010	61855040	62772949	62773691PA	62773715PA	62773774
38414701	58139077	61510234	61855250PA	62772953	62773692	62773716PA	62773775
52140400	58431600	61602410	61863136	62773096PA	62773695	62773718PA	62773801PB
52150300	58442105	61608500	61950017	62773122	62773696PA	62773719	62773801PC
52150400	58488113	61610043	61954432	62773128	62773697PA	62773726PA	62773804PA
52185100	58488125	61610406	62365376PA	62773317	62773698PA	62773736PB	62773806
52185100PA	58488205	61613110	62582430PB	62773318	62773699	62773744PA	62773807
52185300	58532400	61613412	62582430PC	62773417	62773700	62773749PA	62773835PB
52504717	58595603	61616025	62608000	62773651PB	62773702PB	62773750PA	62773836PF
54655700	58606000	61619112	626180355C	62773652PA	62773704PA	62773752	62773837PA
54655701	58612809CL	61628093	62618100PC	62773659	62773705PA	62773753PA	62773839
54768313	58613200PB	61628098	62687501	62773660	62773706	62773755	62773840PA

3061 100		12-15-81	SUMMARY OF EFFECTIVE ALLOWANCE PARTS/EQUIPAGE LISTS	E 1
SHIP TYPE & HULL NO		DATE		PAGE

Figure 2-2.—Example SOEAPL.

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COSAL INDEX—PART I (SECTION A)

EQPT/ COMP MEC	EQUIPMENT/COMPONENT/EQUIPAGE NOMENCLATURE/CHARACTERISTICS	IDENTIFICATION NUMBER	QUANTITY	COL NO.	NOTES	*ALLOW. SUPT. CODE*	SERVICE APPLICATION/INFORMATION
V	AM-1404/FQQ-1, AMPLIFIER,AUDIO FREQUENCY	52140400	2			EEPAA	SONAR
V	AM-1503A/FQQ-1L1, AMPLIFIER ASSEMBLY	62773952PA	2			EEPAA	SONAR
V	AM-1503/FQQ-1 L1, AMPLIFIER ASSEMBLY	52150300	1			EEPAA	SONAR
V	AM-1504/FQQ-1, AMPLIFIER,AUDIO FREQUENCY	52150400	83			EEPAA	SONAR
V	AM-1567A/FQQ-2, AMPLIFIER,RADIO FREQUENCY	62773954PA	29			EEPAA	SONAR
V	AM-1851/FQQ, AMPLIFIER ASSEMBLY	52185100PA	5			EEPAA	SONAR
V	AM-1853/FQQ, AMPLIFIER,AUDIO FREQUENCY	52185300	1			EEPAA	SONAR
V	AM-3268/USM, PREAMPLIFIER,VERTICAL,PLUG IN	62774078PA	1			EEPAA	SONAR
V	AM-3269/USM, PREAMPLIFIER,VERTICAL,PLUG IN	61855010SA	3			EEPAA	TEST
V	AM-3470A/FQQ-2(V)	10011633PA	1			EEPFD	SONAR
V	AM-3471A/FQQ-2(V), AMPLIFIER ASSEMBLY	62774831CM	1			JEPAU	SONAR
V	AM-3529/FQQ-9(V), AMPLIFIER,AUDIO FREQUENCY	62774263PA	1			EEPFD	SONAR
V	AM-3530/FQQ-2A(V), AMPLIFIER ASSEMBLY	6277396RPA	1			EEPAA	SONAR
V	AM-3905/URT, AMPLIFIER,AUDIO FREQUENCY	61950017	2			EEPAA	RADIO
V	AM-4401/FQA-5(V), AMPLIFIER-CONVERTER	62774523PA	9			EEPAA	SONAR
V	AM-6818/FQA-5(V), AMPLIFIER ASSEMBLY	52504717	2			EEPAA	SONAR
V	AN/FGC-100A	54655701	1			EEPAA	RADIO
V	AN/FGC-100, TELEPRINTER SET	54655700	1			EEPAA	RADIO
V	AN/FQA-11A(V)7, AMPLIFIER-PATCHING PANEL GROUP	54768313	2 1			EEPAP	SONAR
V	AN/FQM-4, TEST SET,SONAR	62774087PA	1			EEPAA	SONAR
V	AN/FQM-7, SONAR SET,CARRIER FREQUENCY	62774872PA	1			EEPAA	SONAR
V	AN/FQQ-2A(V), SONAR SET	62774751CL	1			EEPAU	SONAR

3061 100		12-15-81	1st digit ——— Technical Bureau/Cognizance 2d. & 3d. digits —— Program - Support Activity 4th. & 5th. digits —— Logistic - Support Status	I	A	E 1
SHIP TYPE & HULL NO.		DATE	* ALLOWANCE SUPPORT CODES	PART	SECTION	PAGE

Figure 2-3.—Example of COSAL Part 1 Section A. 182(M5).45

COSAL INDEX—PART I (SECTION B)

SERVICE APPLICATION/INFORMATION	EQPT./COMP. MEC	EQUIPMENT/COMPONENT/EQUIPAGE NOMENCLATURE CHARACTERISTICS	IDENTIFICATION NUMBER	QUANTITY	CDL NO.	NOTES	*ALLOW SUPT. CODE
GENERAL 20009GEN	V	AN/URC-32A, TRANSCEIVER, HF	5R442105	2			EEPAA
	V	J-931/FQQ-1, JACK BOX	70043100	6			EEPAA
	V	PU-389A/FQQ, GENERATOR SET,DIESEL ENGINE	79819600PB	2			EEPAA
	V	TS-1543/FQA-4(V), ANALYZER,SPECTRUM	62773652PA	20			EEPAA
	V	341/ADCV-15	10011189NA	1			EEPFE
	V	4416 AEL 80009-106	7-670051369		1		EFQAA
	V	573	10008731NA	1			EEPFD
	V	80009-106, GENERATOR,SIGNAL	38000971	1			EEPAA
POWER 50008POWER	V	GS-56183	62773128	1			EEPAA
	V	PE-107A/FQQ-1	62774220PA	1			EEPAA
	V	SA-559/FQQ-1, SWITCH,KNIFE	85155900	2			EEPFD
	V	SB-559/FQQ-1	62775154PA	2			EEPAA
RADIO 70001RADIO	V	AM-3905/URT, AMPLIFIER,AUDIO FREQUENCY	61950017	2			EEPAA
	V	CY-438(V)2/FYQ-70(V) CONSOLE DATA RELATE UNIT 860	33053336	/			EEPAA
	V	AN/FGC-100A	54655701	1			EEPAA
	V	AN/FGC-100, TELEPRINTER SET	54655700	1			EFPAA
	V	AN/FRC-144, RADIO SET	54819644CL	1			EEPAU
	V	AN/FSC-1(V), COMMUNICATIONS CENTRAL	54925621CL	10			EEPAU
	V	AN/GGM-1, TEST SET, TELETYPEWRITER	55030100	1			EFPAA
	V	AN/PRC-61, RADIO SET	56619700	4			EFPAA
	V	AN/SRA-22, ANTENNA COUPLER GROUP	57101400CL	2			EEPAU
	V	AN/UGC-48A, LL ASR TELETYPEWRITER	58139077	1			EEPAA
	V	AN/UGC-6K, PRINTER, TTY PAGE	5R138242	1			EEPAA
	V	AN/UGC-6L, PRINTER,TTY PAGE	58138243	1			EEPAA
	V	AN/URA-17, COMPARATOR-CONVERTER GROUP	5R431600	4			EEPAA
	V	AN/USH-26(V), RECORDER-REPRODUCER DIGITAL	58612809CL	1			JFPAU
	V	CU-1382B/FRR, COUPLER,ANTENNA	62689384	2			EFPAA
	V	CU-714/SRA-22, COUPLER,ANTENNA	62687501	2			EEPAA
	V	C-2698/SRA-22, CONTROL,ANTENNA COUPLER	61259301	2			EFPAA
	V	C-7660/FRC, CONTROL,RADIO SET	61399730	4			EEPAA
	V	KWQ-8/TSEC	92601700	3			FEPCF
	V	MV-828A, MILLIVOLTMETER	58228906	1			EFPFD
	V	MV-828A, MILLIVOLTMETER 4200 AEL 85711-MV-828A	7-670050034		1		EEQFD
	V	R-1051B/URR, RECEIVER, RADIO	R1095102	4			EFPAA
	V	R-1541/GRC, RECEIVER,RADIO	81151201	1			EEPAA
	V	R-2748/FRR, RECEIVER,RADIO	81027402	1			EEPAA
	V	SB-932/U, PANEL,SIGNAL DISTRIBUTION,RADIO	85293200	1			EEPFD
	V	TSEC/KG-34	92600245	2			EFPAA
	V	TSEC/KWX-8	92601800PA	10			EFPAA

3061 100		12-15-81	1st. digit — Technical Bureau/Cognizance 2d. & 3d. digits — Program Support Activity 4th. & 5th. digits — Logistic Support Status	I	B	E 1
SHIP TYPE & HULL NO.		DATE	*ALLOWANCE SUPPORT CODES S	PART	SECTION	PAGE

Figure 2-4.—Example of COSAL Part 1 Section B. 182(M5).46

ALLOWANCE PARTS LIST (APL)

EQUIPMENT NOMENCLATURE OR GENERIC CHARACTERISTICS	TECHNICAL DOCUMENT NUMBER	MANUAL / PLAN	IDENTIFICATION NO	DATE	PAGE
55026-260, MULTIMETER			06008600PD	12-15-81	1

PART NUMBER	SOURCE MAINT RECOVERY	NOUN	QTY IN ONE EQPT/COMP	ALLOW UNIT	ON BOARD ALLOWANCE TABLE — NUMBER OF EQUIPMENTS COMPONENTS: 1	2	3	4	5-8	9-20	21-50
H17SIC10046	55026 JACK-TIP RED	9N 5935-00-201-3709	1PA2ZZ	3EA	SEE SNSL FOR ALLOW						
RN65B2003F	10001 RESISTOR,FIXED,FILM	9N 5905-00-540-9796	1PA2ZZ	1EA							
SSP0-APPLICABLE	10001 RESISTOR,FIXED,FILM	9N 5905-00-823-3477	1PA2ZZ	1EA							
SW120-240	10001 RESISTOR-FXD 4MEG 1-2W	9N 5905-00-061-8229	1PA2ZZ	1EA							
0S022940	10001 RESISTOR,FIXED,FILM	9N 5905-00-433-1182	1PA2ZZ	1EA							
0-008063	55026 RESISTOR,FIXED,WIRE	9N 5905-00-193-3722	1PA2ZZ	1EA							
0-008070	55026 RESISTOR-FXD WW 11.5 OHM	9N 5905-00-196-3583	1PA2ZZ	1EA							
0-008091	55026 RESISTOR,FIXED,WIRE	9N 5905-00-186-2300	1PA2ZZ	1EA							
0-008375	55026 LEAD-TEST	9N 6625-00-649-4824	1PA2ZZ	1EA							
0008285	55026 RESISTOR,FIXED,WIRE	9N 5905-00-395-9964	1PA2ZZ	1EA							
0757-0846	30003 RESISTOR-FXD FILM	9N 5905-00-752-3232	1PA2ZZ	1EA							
1-111584	55026 RESISTOR SET,MATCHE	9N 5905-00-280-0559	1PA2ZZ	1EA							
1-111679	55026 CAPACITOR,FIXED,PAP	9N 5910-00-794-3010	1PA2ZZ	1EA							
1-111756ISSUE1	55026 KNOB	9Z 5355-00-568-0095	1PA2ZZ	1EA							
1-111888	55026 SWITCH,ROTARY	9N 5930-00-248-6309	1PA2ZZ	1EA							
1-111891	55026 SWITCH-RTY	9N 5930-00-548-4342	1PA2ZZ	1EA							
1-113353ISSUE1	55026 RESISTOR,FIXED,FILM	9N 5905-00-258-2498	1PA2ZZ	1EA							
1-113370	55026 RESISTOR,FIXED,FILM	9N 5905-00-904-0490	1PA2ZZ	1EA							
1-113642	55026 KNOB	9Z 5355-00-031-1864	1PA2ZZ	1EA							
15-313770	55026 MULTIMETER,REPLACEM	9N 6625-00-553-4748	1PA2ZZ	1EA							
16R87677-8798	10001 RESISTOR	9N 5905-00-577-6803	1PA2ZZ	1EA							
99999-NIIN-001201030	03950 BATTERY,DRY	9Y 6135-00-120-1030	1PB2ZZ	3EA							
99999-NIIN-001477653	03950 RESISTOR,FIXED,FILM	9N 5905-00-147-7653	1PA2ZZ	1EA							
99999-NIIN-001729149	03950 RESISTOR,FIXED,FILM	9N 5905-00-172-9149	1PA2ZZ	1EA							
99999-NIIN-002009345	03950 RESISTOR,FIXED,FILM	9N 5905-00-200-9345	1PA2ZZ	1EA							
99999-NIIN-005039573	03950 RESISTOR,FIXED,FILM	9N 5905-00-503-9573	1PA2ZZ	1EA							
99999-NIIN-006910226	03950 RESISTOR	9N 5905-00-691-0226	1PA2ZZ	1EA							
99999-NIIN-007644056	03950 RESISTOR-FXD	9N 5905-00-764-4056	1PA2ZZ	1EA							
99999-NIIN-009854228	03950 RESISTOR-FXD 7.5 MEG	9N 5905-00-985-4228	1PA2ZZ	1EA							

E N D

REFERENCE SYMBOL NUMBER		ITEM NAME	STOCK NUMBER	PART SOURCE MAINT RECOVERY	NOUN	QTY IN ONE EQPT/COMP	UNIT	1	2	3	4	5-8	9-20	21-50
3061 100	E 1	ALLOWANCE PARTS LIST (APL)												
SHIP TYPE & HULL NO	PAGE													

IDENTIFICATION NO	DATE	PAGE
06008600PD	12-15-81	1

Figure 2-5.—Example APL. 182(M5).47

may be identified when arranged in alpha-numerical sequence. The designation may be manufacturer's number, service number, drawing, piece, or electric/circuit symbol number. The APL also provides the item name, stock number, and the quantity of each part found in the equipment. For example, in figure 2-5 all of the parts listed are components of the multimeter, nomenclature 55026-260. In the onboard allowance table, the figure refers to the Stock Number Sequence Lists (SNSL). The SNSL is located in Part III of the COSAL.

Figure 2-6 is an example of an AEL. The AEL is similar to the APL but provides information on equipage.

COSAL, PART III

Part III of the COSAL is composed of four parts as follows:

Section A	Storeroom Items (SRI)
Section B	Operating Space Items (OSI)
Section CR	Operating Space Items (OSI)
Section D	Alternate Number Cross-Reference

Section A is a list of items by National Item Identification Number (NIIN) that are considered Storeroom Items. These items are maintained by the supply department at your command.

Section B is a list of items by NIIN that are maintained in the operating space, as Operating Space Items. This section provides a list of items that should be maintained within the division.

Section CR is also a list of items to be maintained by the division as Service Ready Spares. An item may be listed in Section CR and in Section A if the usage warrants backup support.

The format of Sections A, B, and CR is the same. This format is referred to as the Stock Number Sequence List (SNSL). Figure 2-7 is an example of Section A.

Section D, illustrated in figure 2-8, provides a cross-reference list of alternate numbers to NIIN/NICN (Navy Item Control Number). This section can be used to convert part numbers from parts lists to an NIIN/NICN.

EQUIPMENT ACCOUNTING

The COSAL for each activity is based on the equipment installed and is derived from the information contained in the Weapon Systems File (WSF) at SPCC. Since each site does not have the same equipment or configuration, it is necessary to maintain accountability of the equipment and the configuration installed at each site. The system used to accomplish this task is the Shipboard Equipment Configuration Accounting System (SECAS). SECAS is a program which does the following:

- Identifies equipment/components.
- Precisely locates identified items.
- Records all associated data.
- Verifies accomplishment of specific engineering changes.
- Provides data to engineering, supply support, and operational managers.

When equipment is newly installed, removed or modified, the action is documented on OPNAV Form 4790/CK by following the instructions provided in OPNAVINST 4790.4.

PARTS IDENTIFICATION

Before you can requisition a replacement part, you must first properly identify it. Each technical manual comes with a parts list, but since there are many different types of technical manuals in use, no specific rule can be followed to locate a part number. Each situation must be handled differently.

Generally, a part is identified by relating the faulty part, which you locate on a diagram, to the parts list of the technical manual for that equipment. The identification in the parts list will have a part number and may also have a manufacturer's number and/or a description of the part.

ALLOWANCE EQUIPAGE LIST (AEL)

EQUIPAGE NOMENCLATURE/CHARACTERISTICS: 400H SER-313 SERIES 4206 AEL 28480-400-H

TECHNICAL DOCUMENT NUMBER | MANUAL | PLAN | QTY

IDENTIFICATION NO: 7-670050041 | DATE: 12-15-81 | PAGE: 1

CHARACTERISTICS

APL NUMBER/RIC 61610041
ALLW SUPPORT CODE AA
PRIORITY 37
WEIGHT 18.0 LB
CUBE 0.6 CF L12.0 W 7.5 H 11.5 INCHES
CALIBRATION REQUIRED YES
COLUMN SELECTED BASED ON EQUIPMENTS ON BOARD.
TOTAL SHIPBOARD ALLOWANCE REQUIREMENTS FOR
TEST EQUIPMENT ASSIGNED TO THIS SCAT CODE
ARE PRINTED IN THE SPETERL, SHIPS PORTABLE
ELECTRICAL/ELECTRONIC TEST EQUIPMENT
REQUIREMENTS LIST, FOR EACH INDIVIDUAL SHIP
ALTERNATE NOMENCLATURE CA Q1-400 H
HEWLETT-PACKARD MODEL 400H
ITEMS TO BE TRANSFERRED WITH TEST EQUIPMENT
INSTRUCTION MANUALS
28480-400-H VOLTMETER ELECTRONI
6GH6625-00-557-8261 TE UPE244

FSCM	PART NUMBER	NOMENCLATURE	SCAT CODE	QTY	UM	ON BOARD ALLOWANCE TABLE COL 1	COL 2	COL 3	COL 4	COL 5	COL 6	COL 7	COL 8
99499	NIIN-005578261	VOLTMETER,ELECTRONI	7ZH6625-00-557-8261TEUPA	2DD	1	EA	1	1	2	3	4	5	6	7	8

E N D

REFERENCE NO/DESCRIPTIVE DATA	ITEM NAME	STOCK NO	FSCM	PART NUMBER	NOMENCLATURE	SCAT CODE	QTY	1	2	3	4	5	6	7	8
3061 100								7-670050041		12-15-81				1	
SHIP TYPE & HULL NO	PAGE	PART II ALLOWANCE EQUIPAGE LIST (AEL) SECTION C						IDENTIFICATION NO		DATE				PAGE	
	E 2														

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Figure 2-6.—Example AEL.

PART III - COSAL STOCK NUMBER SEQUENCE LIST (SNSL)

STOCK NUMBER	ITEM NAME	EQUIPMENT/ COMPONENT/ EQUIPAGE ID NO.	U/I	ALLOWANCE QUANTITY	NOTES	TOTAL SHIP'S POPULATION PER ID NO.	MIL. ESS. CODE	◆ SUPPLY MGMT SL	SLA	TSS	SMC	SC	SVC	UNIT PRICE	DERIV	UNIT CUBE
1HM0099-LL-HHA-6431	CONNECTOR,RECEPTACL	52504717	EA	1		72	V1	0	00			U	R		I	
1HS0099-LL-MA2-6145	PWR SUPPLY	62776156	EA	1												
1HM0099-LL-MR7-0870	JACK,TEL	62779525	EA	1		50	V1	0	00			U	R		I	
1HM0099-LL-MR7-6103	TERMINAL,LUG	92820242	EA	4		152	V1	0	00			U	R		D	
1HM0001-LL-TRZ-7577	BATTERY CONTACT	58627092	EA	6		12	V1	0	00			U	R		I	
9N 5961-00-003-3574	TRANSISTOR	62773652PA	EA	1		88	V1	0	00	B		U	R		I	001
9N 5905-00-005-2867	RESISTOR,FIXED,COMP	58442105	EA	1		6	V1	0	00			U	R		I	
		58617811				6	V1									
		58617812				1	V1									
		61855010				2	V1									
		61855010SA				3	V1									
		61863136				1	V1									
		62773801PB				2	V1									
		62773801PC				1	V1									
1HS3020-00-005-5408	GEAR,SPUR	58138243	EA	1		1	V1	0	00	B		U	R		I	009
		58139077				1	V1									
		92820242				2	V1									
9F 3120-00-005-5493	BEARING,SLEEVE	58138243	EA	1		1	V1	0	00	B	B	U	R		I	009
		92820242				2	V1									
9N 5910-00-007-2031	CAPACITOR,FIXED,ELE	32848021SA	EA	1		2	V1	0	00			U	R		I	
		58442105				24	V1									
		61613110				1	V1									
		61613112				1	V1									
		62775162PA				16	V1									
9N 5910-00-007-2032	CAPACITOR,FIXED,ELE	32848021SA	EA	1		8	V1	0	00			U	R		I	
		61259301				2	V1									
		61602410				1	V1									
		62774848				4	V1									
		62774849				1	V1									
		62774850				1	V1									
		62774851				1	V1									
		62774852				1	V1									
		62774853				1	V1									

3061 100		12-15-81	SC – Security Class'n SL – Shelf Life SLA – Shelf-life Action SMC – Special-mat'l Content TSS – Type of Storage Space	III	A	1
SHIP TYPE & HULL NO.		◆ DATE	◆ SUPPLY MANAGEMENT CODES	PART	SECTION	PAGE

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Figure 2-7.—Example SNSL.

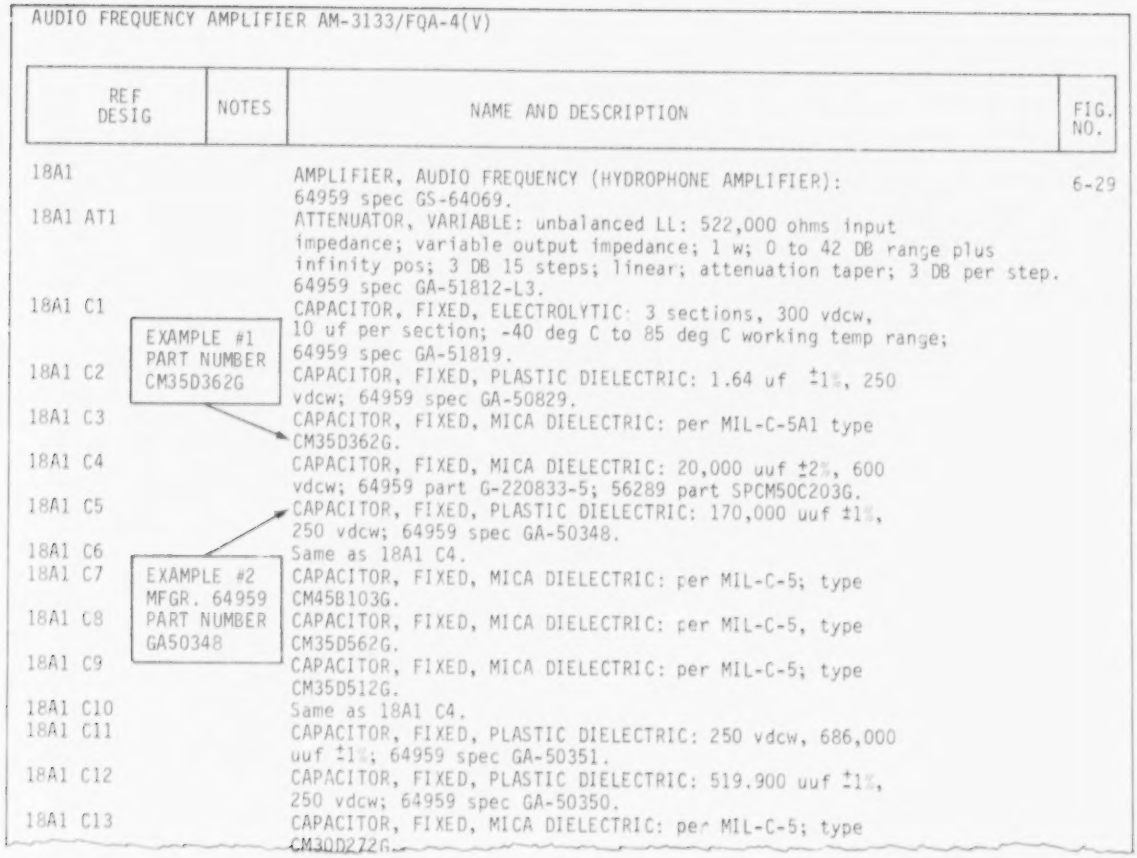
PART III SECTION D ALTERNATE NUMBER CROSS REFERENCE TO NIIN/NICN

FSCM	ALTERNATE NR	NIIN/NICN	FSCM	ALTERNATE NR	NIIN/NICN
80103	ABA-CC24	00-114-2617	70674	A14514	00-053-7989
82289	AC3G	00-478-3338	99934	A201-1	00-066-9726
28480	AC54E	00-225-8549	99934	A201-142	00-410-0580
28480	AC54F	00-080-9780	09019	A406	00-972-9306
64959	AF117RELAY	00-100-5173	80009	A56965	00-201-4783
64959	AF152RELAY	00-858-4693	72914	A9848-1	00-814-3204
64959	AF525RELAY	00-839-3846	72914	A9905-4	01-087-0289
71400	AGC1	00-280-8342	72914	A9906-1	00-023-3618
10001	AGC2	00-474-6125	71590	BAS1209	00-078-7402
64959	AG22RELAY	00-894-3970	64959	BA10004-22	00-983-6114
64959	AJ15RELAY	00-899-6051	64959	BA10007-5	00-223-9100
64959	AJ204RELAY	00-102-5735	64959	BA10009-431	00-578-9179
64959	AJ35RELAY	00-892-9740	64959	BA10021-78	00-252-2013
64959	AK27RELAY	00-100-5174	64959	BA10034-435	00-530-4900
70563	AMP3-4	00-272-6649	64959	BA10068-4	00-667-5934
80058	ANFGC100A	00-054-3346	64959	BA10114-7	00-284-3880
80058	ANUGC6L	00-943-4387	64959	BA10268-2-1	00-265-6296
80058	ANURA17	00-474-3975	64959	BA19925-1	00-271-4336
80058	ANURA17B	00-999-6734	64959	BA38194	00-759-9087
80058	ANUF010	00-884-2116	64959	BA404080-21	00-205-6301
80058	ANUSM311	00-160-1301	64959	BA720324-5	00-259-5038
10001	AN3102A14S5S5S	00-807-9308	64959	BA98004	00-835-0510
10001	AN3102A16S5S1P	00-615-0514	64959	BA98017-52	00-983-6089
88044	AN3136-323	00-155-7864	64959	BA98017-60	00-983-6096
88044	AN340C4	00-167-1376	64959	BA98119-62	00-983-6043
10001	AN380 2-1	00-839-2325	64959	BA98152-22	00-834-1213
10001	AN505C6-8	00-719-5064	64959	BA98152-23	00-827-1820
88044	AN507-832R5	00-051-2352	64959	BA98163	00-264-7932
10001	AN515C8R7	00-054-6669	64959	BA98164-1	00-581-6401
10001	AN515 8R6	00-984-6191	64959	BA98188-1	00-548-0157
88044	AN911-1D-00	00-186-7783	64959	BA98197-6ISSUE8	00-802-9455
88044	AN917-1D	00-287-3699	64959	BA98202ISSUE6PT9	00-664-6706
88044	AN960C4L	00-595-6425	64959	BA98203-35	00-058-9731
88044	AN960C6	00-531-9514	64959	BA98203-36	00-840-0907
88044	AN960C8	00-685-3744	64959	BA98203-54	00-841-4442
88044	AN960C816L	00-306-3167	64959	BA98344	00-257-7717
88044	AN961-416T	00-177-1156	64959	BA98372	00-257-7714
12436	A00009-001	00-833-5072	64959	BA98396-1	00-681-8184
87034	A1H	00-951-3376	64959	BA98407-30	01-028-9238
95712	A100-394	00-951-3319	64959	BA98461-1	00-615-7146

SHIP/HULL	DATE	PAGE	FIRST ALTERNATE NR ON PAGE	LAST ALTERNATE NR ON PAGE
3061 100	12-15-81	1	ABA-CC24	BA98461-1

182(M5).50

Figure 2-8.—Example of COSAL Part III Section D.



AUDIO FREQUENCY AMPLIFIER AM-3133/FQA-4(V)

REF DESIG	NOTES	NAME AND DESCRIPTION	FIG. NO.
18A1		AMPLIFIER, AUDIO FREQUENCY (HYDROPHONE AMPLIFIER): 64959 spec GS-64069.	6-29
18A1 AT1		ATTENUATOR, VARIABLE: unbalanced LL: 522,000 ohms input impedance; variable output impedance; 1 w; 0 to 42 DB range plus infinity pos; 3 DB 15 steps; linear; attenuation taper; 3 DB per step. 64959 spec GA-51812-L3.	
18A1 C1		CAPACITOR, FIXED, ELECTROLYTIC: 3 sections, 300 vdcw, 10 uf per section; -40 deg C to 85 deg C working temp range; 64959 spec GA-51819.	
18A1 C2		CAPACITOR, FIXED, PLASTIC DIELECTRIC: 1.64 uf ±1%, 250 vdcw; 64959 spec GA-50829.	
18A1 C3		CAPACITOR, FIXED, MICA DIELECTRIC: per MIL-C-5A1 type CM35D362G.	
18A1 C4		CAPACITOR, FIXED, MICA DIELECTRIC: 20,000 uuf ±2%, 600 vdcw; 64959 part G-220833-5; 56289 part SPCM50C203G.	
18A1 C5		CAPACITOR, FIXED, PLASTIC DIELECTRIC: 170,000 uuf ±1%, 250 vdcw; 64959 spec GA-50348.	
18A1 C6		Same as 18A1 C4.	
18A1 C7		CAPACITOR, FIXED, MICA DIELECTRIC: per MIL-C-5; type CM45B103G.	
18A1 C8		CAPACITOR, FIXED, MICA DIELECTRIC: per MIL-C-5, type CM35D562G.	
18A1 C9		CAPACITOR, FIXED, MICA DIELECTRIC: per MIL-C-5; type CM35D512G.	
18A1 C10		Same as 18A1 C4.	
18A1 C11		CAPACITOR, FIXED, PLASTIC DIELECTRIC: 250 vdcw, 686,000 uuf ±1%; 64959 spec GA-50351.	
18A1 C12		CAPACITOR, FIXED, PLASTIC DIELECTRIC: 519.900 uuf ±1%, 250 vdcw; 64959 spec GA-50350.	
18A1 C13		CAPACITOR, FIXED, MICA DIELECTRIC: per MIL-C-5; type CM30D272G.	

EXAMPLE #1
PART NUMBER
CM35D362G

EXAMPLE #2
MFGR. 64959
PART NUMBER
GA50348

182(M5).51

Figure 2-9.—Example of a Parts List.

Figure 2-9 is a parts list with two examples indicated. The part number is given in example number 1. In example 2, there is a manufacturer's number, a part number, and a description of the part. The numbers that are listed in the parts list are normally manufacturer's part numbers.

The next step in the process is to determine if the part is available from the Navy Supply System.

NATIONAL STOCK NUMBERS

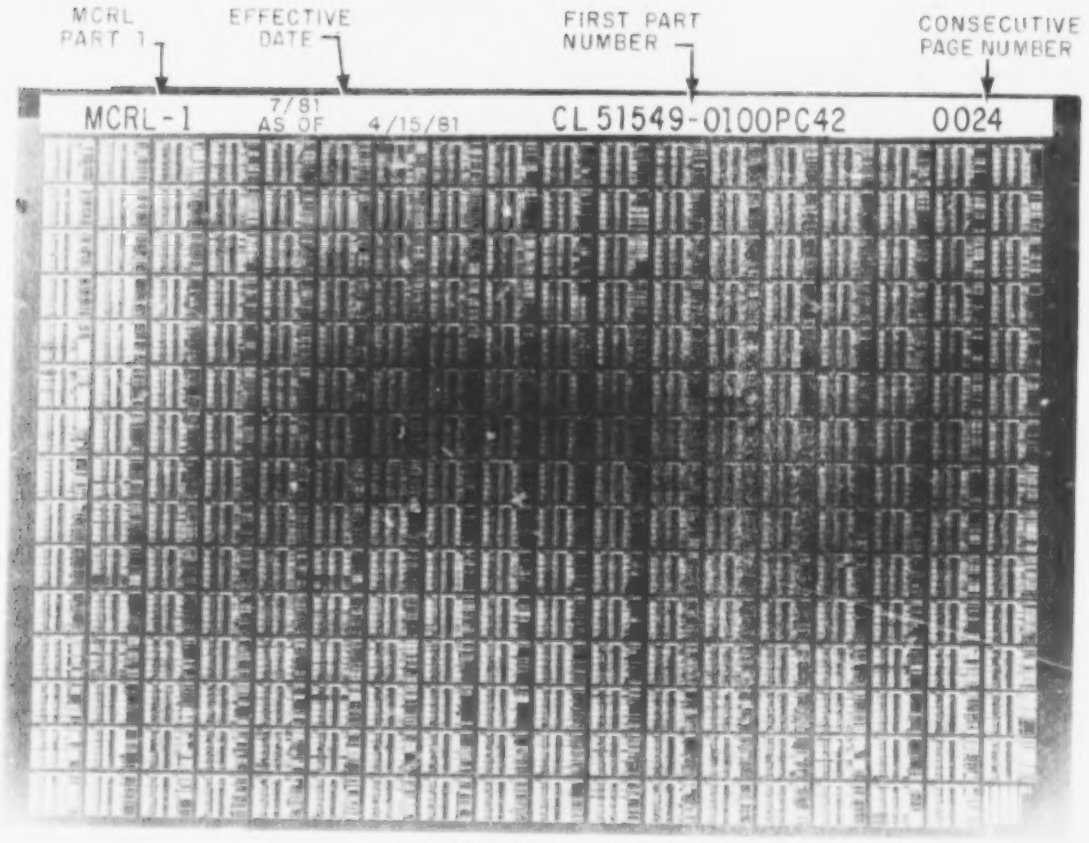
In the Navy Supply System, parts are referred to by an NSN. The NSN consists of a 4-digit Federal Supply Classification (FSC) code followed by a 9-digit NIIN.

5910-00-184-2185

FSC NIIN

National Item Identification Number (NIIN)

The NIIN is a 9-digit number which identifies each item of supply used by the Department of Defense (DOD). The NIIN indexes or relates to identification data which makes an item of supply different (as far as DOD is concerned) from every other item of supply. The amount and type of



182(M5).52

Figure 2-10.—Example MCRL microfiche section.

182(M5).53

Figure 2-11.—Information from the MCRL.

182(M5).54

Figure 2-12.—Information from the MCRL.

identification data will depend on the item and its intended use. Although the NIIN is part of the NSN, it is used independently to identify an item. Except for identification lists, most Federal supply catalogs are arranged in NIIN order. Stock records are also maintained in NIIN order as are load lists and consolidated allowance lists.

NAVY ITEM CONTROL NUMBERS (NICNs)

Items of material that are not included in the Federal control system, but which are stocked or monitored in the Navy Supply System, are identified by NICNs. NICNs are 13-character item identification numbers which are assigned for permanent or temporary control of selected non-NSN items.

MASTER CROSS-REFERENCE LIST (MCRL)

The MCRL is a supply document that is published on microfiche. It provides cross-reference information from part numbers to NSNs.

The MCRL is a consolidated publication that includes items of supply which are used by all the military services. There are two parts to the MCRL. Part 1 is used to cross-reference part numbers to NSNs. Part 2 is used to cross-reference NSNs to part numbers.

In part 1 of the MCRL, part numbers are listed alphanumerically according to the following order of digit precedence:

- Space (Blank)
- Dash (-)
- Letters "A" through "N"
- Letters "P" through "Z"

For example, part number 6 142 would be listed before part number 6-142. The letter "O" is not used because of its possible confusion with the number 0.

Since you will obtain the part number from a parts list, your main use of the MCRL will be part 1.

Figure 2-10 is an example of MCRL, part 1 and explains the heading information. Figures 2-11 and 2-12 show the information displayed from MCRL microfiche. The underlined information in these figures is cross-referenced from the examples in figure 2-9.

MANAGEMENT DATA LIST-NAVY (ML-N)

The ML-N is published on microfiche similar to the MCRL. The ML-N is used to relate NSN data to management data. It is published in NIIN sequence and includes only items for which Navy interest has been recorded. Since the ML-N is a Navy-tailored publication, many of the

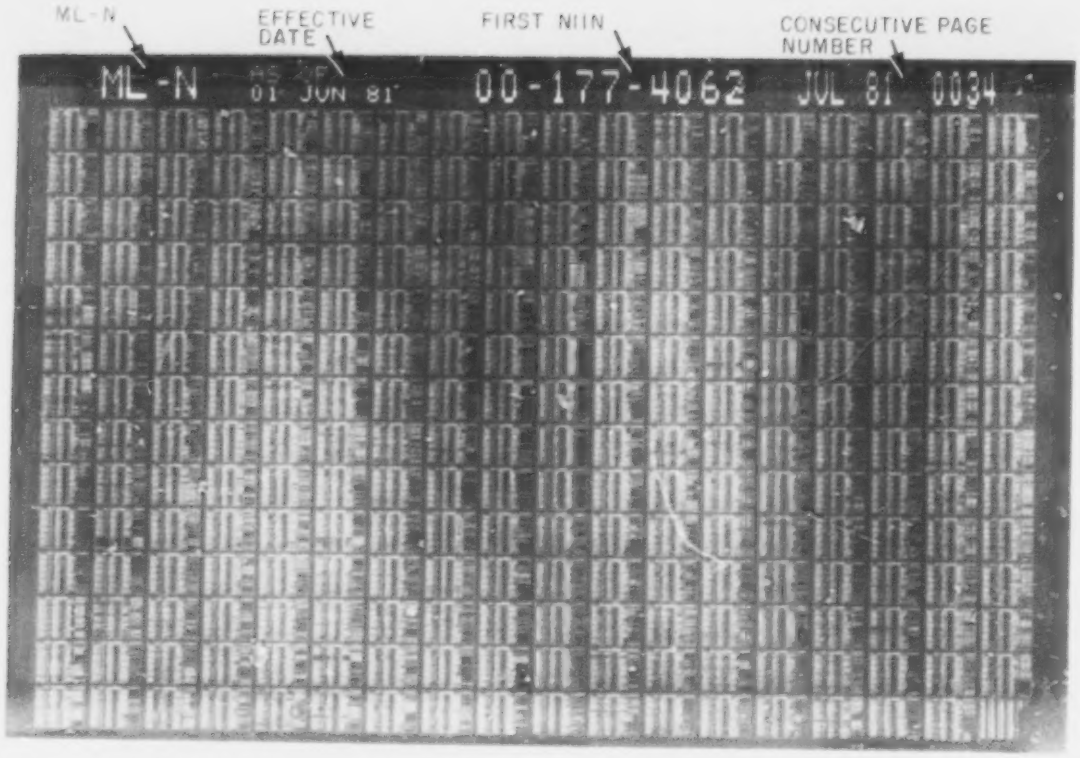


Figure 2-13.—Example ML/N microfiche section. 182(M5).55

Figure 2-14.—Information from the ML/N. 182(M5).56

Figure 2-15.—Information from the ML/N. 182(M5).57

NSNs located on the MCRL will not be found in the ML-N.

Figure 2-13 is an example of an ML-N and explains the heading information. Figure 2-14 and 2-15 show information displayed from ML-N microfiche. The underlined information in figures 2-14 and 2-15 apply to the NSNs obtained from figures 2-11 and 2-12. Notice that the information is complete in figure 2-14 and that this information can be used to obtain the part.

In the case of figure 2-15, the last column indicates that the part has been discontinued without replacement. This does not mean that the part does not exit, but that no stock is maintained for this item.

ELECTRONICS INSTALLATION AND MAINTENANCE BOOKS "REFERENCE DATA"

The part number given in figure 2-9 can also be used with Electronics Installation and Maintenance Books (EIMBs) to obtain more information about the part. One of the handbooks from the EIMB series, Reference Data, NAVSEA 0956-LP-000-0140, is particulary useful. In example 1 on figure 2-9, the part number is CM35D362G. This part number is based on the alphanumerical part numbering system established by military specifications (MIL-SPEC) for electronic components. Figure 2-16 displays the part number and the meaning of each element. It also shows information about the part as given in the EIMB Reference Data Handbook. This information can be used to accurately describe the part when it is being ordered.

COSAL

The COSAL is an excellent source for locating the NSNs of part numbers. The APL/AEL sections provide information on specific equipment and also indicate if the parts are allowed as onboard spares.

SUPPLY TERMINOLOGY

It is important to have a clear understanding of the terminology used in the procurement of parts and equipment. The following terms are

EXAMPLE PART NUMBER AND MEANING-

STYLE
"CM" represents molded, dipped and potted mica-dielectric, fixed capacitors. The numbers identify the various configurations and associated dimensions.

DIMENSIONS (INCHES)			
CM	A	B	C
35	0.770-0.860	0.770-0.860	0.280-0.360

CHARACTERISTIC		
SYMBOL	TEMP. COEF. (ppm/°C)	CAPACITANCE DRIFT
D	-100 to +100	±0.5%

CAPACITANCE (PICOFARADS)
The first two digits represent significant figures and the last digit represents the number of zeros to follow.

CAPACITANCE TOLERANCE	
SYMBOL	TOLERANCE (±)
G	2

182(M5)-58

Figure 2-16.—Information found in the EIMB.

used to designate types of material and information about material:

MATERIAL.—The general term used to designate supplies, repair parts, equipment, and equipage used in the Navy.

REPAIR PART.—The term refers to any item, including modules and consumable-type materials, which has an equipment application and appears on an allowance parts list or a similar parts list.

CONSUMABLES.—The term refers to administrative items not specifically defined as equipage or repair parts.

REPAIRABLE.—The term refers to a component or part designated by the inventory manager as an item which can be economically repaired when it becomes unserviceable. Certain items are identified as "Mandatory Turn-in Repairables," and must be transferred to a designated depot-level repair facility when they become unserviceable and cannot be repaired locally. Repairable items are identified on allowance lists and on the Master Repairable Item List (MRIL).

MILITARY STANDARD REQUISITIONING AND ISSUE PROCEDURE (MILSTRIP)

The MILSTRIP was developed to provide a common language for requesting and supplying material within and among the Armed Forces and the General Services Administration (GSA). MILSTRIP also provides requisition documentation that can be automatically processed and contains all the information necessary to issue, ship, and account for requested material.

MILSTRIP REQUISITIONING FORMS

MILSTRIP requisitioning is based on the use of a coded single line item document for each supply transaction. The following documents are used to order material via the MILSTRIP system:

- DOD Single Line Item Requisition System Document (Manual) (DD Form 1348)
- DOD Single Line Item Release/Receipt Document (DD Form 1348-1)
- Non-NSN Requisition (Manual) (DD Form 1348-6)

DD Form 1348

The DOD Single Line Item Requisition System Document (Manual), DD Form 1348, is used by supply personnel to order material that is identified by a NSN and is available from the Navy Supply System.

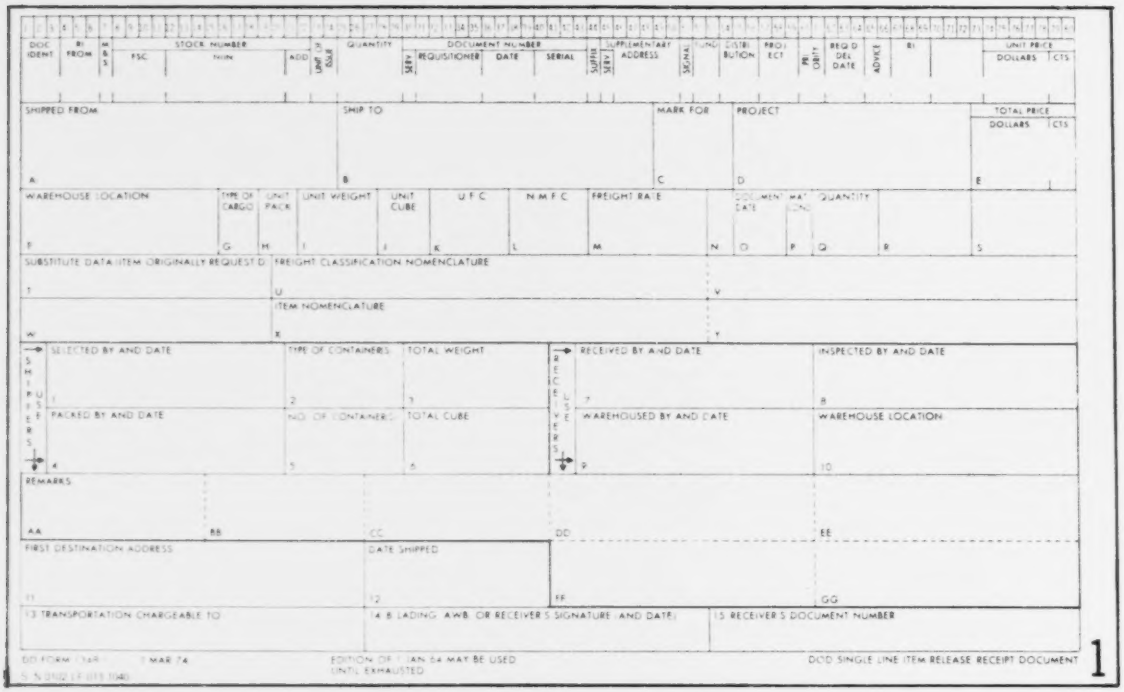
DD Form 1348-1

The DOD Single Line Item Release/Receipt Document, DD Form 1348-1, is used when material is shipped from one location to another. Figure 2-17 is an example of a DD Form 1348-1. This form is completed by supply personnel. The most common use of DD Form 1348-1 is for the turn-in of repairable items.

DD Form 1348-6

The Non-NSN Requisition (Manual), DD Form 1348-6, is used to order material that cannot be identified by an NSN. Some of the information on this form will be completed by you, and additional information will be added by supply personnel.

Figure 2-18 shows an example of DD Form 1348-6. The upper portion of this form is completed by the supply department and is essentially the same as DD Form 1348. The lower portion provides nine data blocks for additional identification data. Most of the information for the lower portion of the form can be found in the parts list of the appropriate technical manual. Block 9 provides space for remarks and should be used for all additional data not entered elsewhere on the form. It is important to enter the APL number for the equipment, when one exists, as the ordering of this part may be high enough in demand to justify adding it to the APL. A NAVSUP Form 1250 should be submitted in addition to the DD Form 1348-6.



43.24.1

Figure 2-17.—DD Form 1348-1.

NAVSUP FORM 1250

The most common supply form that you will use is NAVSUP Form 1250. This form is not part of the MILSTRIP system, it is used to obtain parts from the supply department at your command. When you need a part and locate the NSN, you must determine the location of the part. If the part is maintained by the local supply department, you can obtain the part by submitting a NAVSUP Form 1250. If the supply department does not have the part in stock, they will complete a DD Form 1348 to order the part.

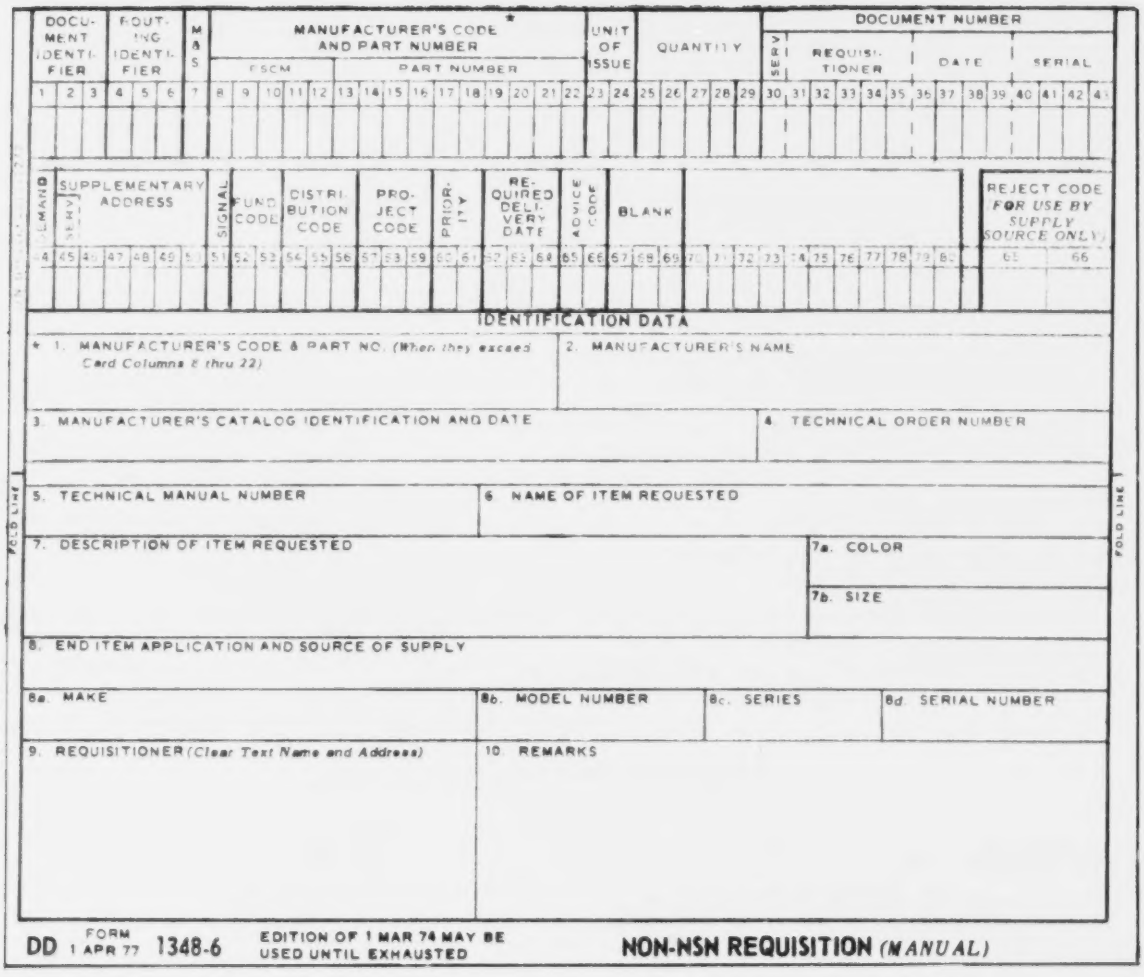
Figure 2-19 is an example of NAVSUP Form 1250 with a table showing the information to be completed. When the form has been completed, it should be passed to the division supply petty officer. The division supply petty officer will make appropriate entries in the supply log and forward the requisition to the supply department. The supply department will then process the form and issue, or order, the part.

SUPPLY LOG

As was explained in Part 1 of this module, a maintenance division may consist of several work centers. When parts are ordered, they are ordered by the division. In order to centralize the ordering of repair parts, one person is usually designated as the supply petty officer.

The supply petty officer maintains a log of all part and material requisitions. There is no standard format for the supply log, but it will normally contain the following information:

- Date
- Nomenclature
- Noun Name
- Part Number (NSN)



43.24.6.

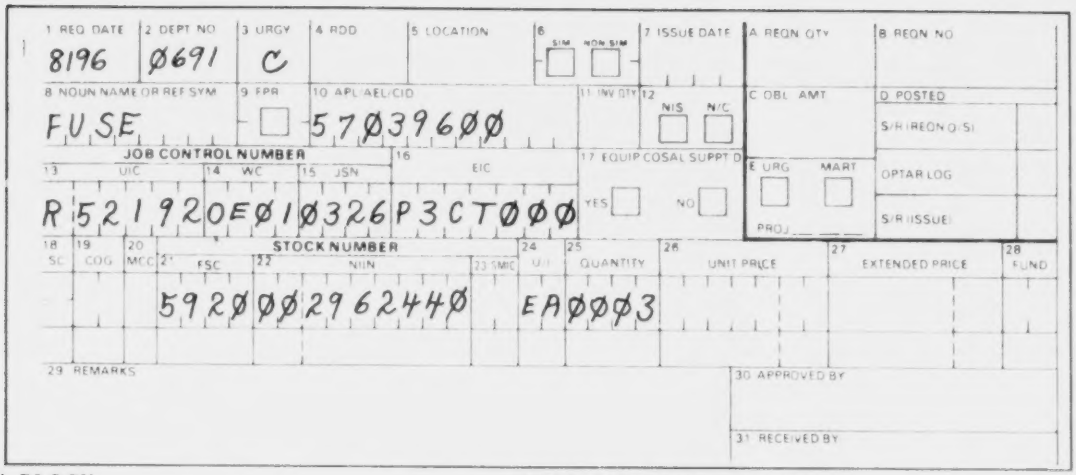
Figure 2-18.---DD Form 1348-6

- Quantity
- Price

The supply log provides a source of reference for parts that have been ordered and for expenditure of funds.

SUMMARY

This module part has provided basic information on supply functions and logistic support for electronic equipment. An attempt has been made to familiarize you with sources of information and the supply documents required for ordering repair parts for electronic equipment.



DATA BLOCK		INFORMATION TO BE SHOWN
1		MATL REQUEST DATE—Julian date on which the issue request is submitted.
2		DEPT NO—Internal control number for specific identification of the issue request.
3		URGY—Urgency-of-need designator.
8		NOUN NAME OR REFERENCE SYMBOL—The circuit or reference symbol number is entered for all electronic or ordnance repair parts; the noun name for all other materials.
9		FPR—Checked when requested item is a failed part replacement.
10		APL/AEL—The COSAL APL/AEL number of equipment for which the material is needed.
13	JCN Job Control Number	UIC—Ship's unit identification code prefixed by service designator R, V, or N.
14		WC—The code that identifies the work center that will use the material.
15		JSN—The job sequence number which, with the UIC and WC code, identifies a specific maintenance action.
16		EIC—The equipment identification code.
21-22-23		Stock Number—NSN including SMIC, if applicable.
24		U/I—The appropriate unit of issue abbreviation for the item requested.
25		QUANTITY—The quantity required. The quantity of each maintenance related item should be limited to that actually required for a specific maintenance action.
29		REMARKS—Additional information pertinent to the requested item, when required for identification or management purposes.
30		APPROVED BY—Signature as required in NAVSUP P-485.

17.84

Figure 2-19.—NAVSUP Form 1250 and data entries.

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OCEAN SYSTEMS TECHNICIAN 3 & 2

NAVEDTRA 062-05-45-88

Prepared by the Naval Education and Training Program Management
Support Activity, Pensacola, Florida

Congratulations! By enrolling in this course, you have demonstrated a desire to improve yourself and the Navy. Remember, however, this self-study course is only one part of the total Navy training program. Practical experience, schools, selected reading, and your desire to succeed are also necessary to successfully round out a fully meaningful training program. You have taken an important step in self-improvement. Keep up the good work.

HOW TO COMPLETE THIS COURSE SUCCESSFULLY

ERRATA: If an errata comes with this course, make all indicated changes or corrections before you start any assignment. Do not change or correct the Training Manual (TRAMAN) or assignments in any other way.

TEXTBOOK ASSIGNMENTS: The TRAMAN pages that you are to study are listed at the beginning of each assignment. Study these pages carefully before attempting to answer the questions in the course. Pay close attention to tables and illustrations because they contain information that will help you understand the text. Read the learning objectives provided at the beginning of each chapter or topic in the text and/or preceding each set of questions in the course. Learning objectives state what you should be able to do after studying the material. Answering the questions correctly helps you accomplish the objectives.

BLACK DOT INFORMATION: Black dots (●) may be used in the text and correspondence course to emphasize important or supplemental information and to highlight instructions for answering certain questions. Read these black dot entries carefully; they will help you answer the questions and understand the material.

SELECTING YOUR ANSWERS: After studying the text, you should be ready to answer the questions in the assignment. Read each question carefully, then select the BEST answer. Be sure to select your answer from the subject matter in the TRAMAN. You may refer freely to the TRAMAN and seek advice and information from others on problems that may arise in the course. However, the answers must be the result of your own work and decisions. You are prohibited from referring to or copying the answers of others and from giving answers to anyone else taking the same course. Failure to follow these rules can result in suspension from the course and disciplinary action by the Commander, Naval Military Personnel Command.

SUBMITTING COMPLETED ANSWER SHEETS: It is recommended that you complete all assignments as quickly as practicable to derive maximum benefit from the course. However, as a minimum, your schedule should provide for the completion of at least one assignment per month--a requirement established by the Chief of Naval Education and Training. Failure to meet this requirement could result in disenrollment from the course.

TYPES OF ANSWER SHEETS: If you received Automatic Data Processing (ADP) answer sheets with this course, the course is being administered by the Naval Education and Training Program Management Support Activity (NETPMSA), and you should follow the instructions in paragraph A below. If you did NOT receive ADP answer sheets with this course, you should use the manually scored answer sheets attached at the end of the course and follow the directions contained in paragraph B below.

A. ADP Answer Sheets

All courses administered by the NETPMSA include one blank ADP answer sheet for each assignment. For proper computer processing, use only the original ADP answer sheets. Reproductions are not acceptable.

Recording Information on the ADP Answer Sheets: Follow the "MARKING INSTRUCTIONS" on the answer sheet. Be sure that blocks 1, 2, and 3 are filled in correctly. This information is necessary for your course to be properly processed and for you to receive credit for your work.

As you work the course, be sure to mark your answers in the course booklet because your answer sheets will not be returned to you. When you have completed an assignment, transfer your answers from the course booklet to the answer sheet.

Mailing the Completed ADP Answer Sheets: As you complete each assignment, mail the completed ADP answer sheet to:

Commanding Officer
Naval Education and Training Program
Management Support Activity
Pensacola, FL 32559-5000

The answer sheets must be mailed in envelopes, which you must either provide yourself or get from the local Educational Services Officer (ESO). You may enclose more than one answer sheet in a single envelope. Remember, regardless of how many answer sheets you submit at a time, the NETPMSA should receive at least one a month. NOTE: DO NOT USE THE COURSE COMMENTS PAGE AS AN ENVELOPE FOR RETURNING ANSWER SHEETS OR OTHER COURSE MATERIALS.

Grading: The NETPMSA will grade your answer sheets and notify you by letter of any incorrect answers. The passing score for each assignment is 3.2. Should you get less than 3.2 on any assignment a blank ADP answer sheet will be enclosed with the letter listing the questions incorrectly answered. You will be required to redo the assignment and resubmit a new completed answer sheet. The maximum score that can be given for a resubmitted assignment is 3.2.

Course Completion: When you complete the last assignment, fill out the "Course Completion" form in the back of the course and enclose it with your last answer sheet. The NETPMSA will issue you a letter certifying that you satisfactorily completed the course. You should make sure that credit for the course is recorded in your service record.

Student Questions: Any questions concerning this course should be referred to the NETPMSA by mail using the address listed above or by telephone: AUTOVON 922-1366 or commercial (904) 452-1366.

B. Manually Scored Answer Sheets

If you did not receive ADP answer sheets with this course, it is being administered by your local command and you must use the answer sheets attached at the end of the course booklet.

Recording Information on the Manually Scored Answer Sheets: Fill in the appropriate blanks at the top of the answer sheet. This information is necessary for your course to be properly processed and for you to receive credit for your work. As you work the course, be sure to mark your answers in the course booklet, because your answer sheets will not be returned to you. When you have completed an assignment, transfer your answers from the course booklet to the answer sheet.

Submitting the Completed Manually Scored Answer Sheets: As you complete each assignment, submit the completed answer sheet to your ESO for grading. You may submit more than one answer sheet at a time. Remember, you must submit at least one assignment a month.

Grading: Your ESO will grade the answer sheets and notify you of any incorrect answers. The passing score for each assignment is 3.2. Should you get less than 3.2 on any assignment, the ESO will not only list the questions incorrectly answered but will also give you a pink answer sheet marked "RESUBMIT." You will be required to redo the assignment and complete the "RESUBMIT" answer sheet. The maximum score that can be given for a resubmitted assignment is 3.2.

Course Completion: After you have submitted all the answer sheets and have earned at least a 3.2 on each assignment, your command will give you credit for this course by making the appropriate entry on Page 4 of your service record.

Student Questions: Any questions concerning the administration of this course should be referred to your ESO.

NAVAL RESERVE RETIREMENT CREDIT

This course is evaluated at 1 Naval Reserve retirement point which will be credited upon satisfactory completion of the entire course. These points are creditable to personnel eligible to receive them under current directives governing retirement of Naval Reserve personnel.

COURSE OBJECTIVES

In completing this course, you will demonstrate a knowledge of the subject matter by correctly answering questions on the following: Navy organization and how this organization relates to the Electronics Maintenance Division; various aspects of the 3-M system; administrative duties in an Electronic Maintenance Division; equipment categories and agencies involved in logistic support; some aspects and uses of the COSAL; and sources used to identify and order replacement parts.

Naval courses may include several types of questions—multiple-choice, true-false, matching, etc. The questions are not grouped by type but by subject matter. They are presented in the same general sequence as the textbook material upon which they are based. This presentation is designed to preserve continuity of thought, permitting step-by-step development of ideas. Not all courses use all of the types of questions available. The student can readily identify the type of each question, and the action required, by inspection of the samples given below.

MULTIPLE-CHOICE QUESTIONS

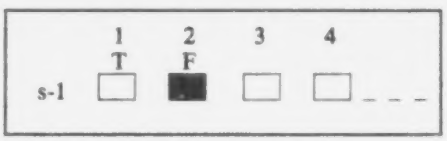
Each question contains several alternatives, one of which provides the best answer to the question. Select the best alternative, and blacken the appropriate box on the answer sheet.

SAMPLE

s-1. Who was the first person appointed Secretary of Defense under the National Security Act of 1947?

1. George Marshall
2. James Forrestal
3. Chester Nimitz
4. William Halsey

Indicate in this way on the answer sheet:



TRUE-FALSE QUESTIONS

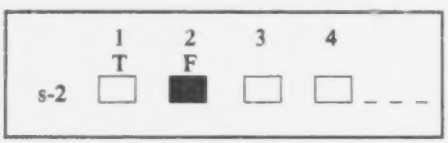
Mark each statement true or false as indicated below. If any part of the statement is false the statement is to be considered false. Make the decision, and blacken the appropriate box on the answer sheet.

SAMPLE

s-2. Ali naval officers are authorized to correspond officially with any systems command of the Department of the Navy without their respective commanding officer's endorsement.

1. True
2. False

Indicate in this way on the answer sheet:



MATCHING QUESTIONS

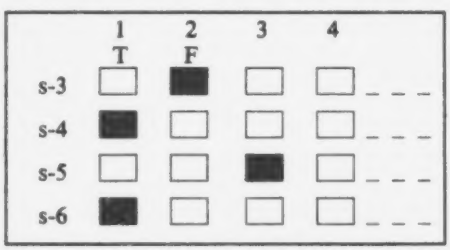
Each set of questions consists of two columns, each listing words, phrases or sentences. The task is to select the item in column B which is the best match for the item in column A that is being considered. Items in column B may be used once, more than once, or not at all. Specific instructions are given with each set of questions. Select the numbers identifying the answers and blacken the appropriate boxes on the answer sheet.

SAMPLE

In questions s-3 through s-6, match the name of the shipboard officer in column A by selecting from column B the name of the department in which the officer functions. Some responses may be used once, more than once, or not at all.

A. OFFICER	B. DEPARTMENT
s-3. Damage Control Assistant	1. Operations Department
s-4. CIC Officer	2. Engineering Department
s-5. Disbursing Officer	3. Supply Department
s-6. Communications Officer	

Indicate in this way on the answer sheet:



Assignment 1

Administration and Supply

Textbook Assignment: NAVEDTRA 062-05-45-88.

Learning Objective: Identify the aspects of Navy organization and the organizational relationships within a typical Electronics Maintenance Division.

1-1. In the Navy, what is the process by which authority and responsibility are established?

1. Administration
2. Organization
3. Division
4. Unitization

1-2. What term is used to describe the levels of authority within the Navy?

1. Echelon of authority
2. Command structure
3. Chain of Command
4. Principles of Management

1-3. Which of the following factors determines the organizational structure of a NAVFAC?

1. Rank of the commanding officer
2. Geographic location
3. Size and assigned mission
4. Type of equipment installed

1-4. The specific duties for each position within your division are found in which of the following sources?

1. Local command instructions
2. Type Commander's instructions
3. Fleet instructions
4. OPNAV instructions

1-5. What is the most common additional job title of the Electronics Maintenance Division Officer?

1. Electronics Maintenance Officer
2. 3-M Systems Coordinator
3. Safety Officer
4. Readiness Officer

1-6. Who is responsible for the administration of the electronic material maintenance program?

1. Department head
2. Electronics Maintenance Division Officer
3. Electronics Maintenance Officer
4. Maintenance technician

1-7. What individual is responsible for the welfare and morale of personnel assigned to the Electronic Maintenance Division?

1. Work center supervisor
2. Leading Petty Officer
3. Leading Chief Petty Officer
4. Division officer

1-8. Who assigns division personnel to specific duties?

1. Division officer
2. Electronics Maintenance Officer
3. Leading Chief Petty Officer
4. Work center supervisor

1-9. The LCPO reports to what individual?

1. Department head
2. 3-M Systems Coordinator
3. Electronics Maintenance Officer
4. Division officer

1-10. The position of LPO is assigned by what individual?

1. Department head
2. Readiness officer
3. EMO
4. LCPO

Learning Objective: Identify various aspects of the 3-M system.

1-11. What is the purpose of the 3-M system?

1. To ensure maximum equipment operation readiness
2. To provide an inventory list of equipment
3. To ensure proper documentation of maintenance actions
4. To provide scheduling of corrective maintenance

1-12. The command 3-M coordinator reports to what individual?

1. Commanding officer
2. Executive officer
3. Department head
4. Type commander

1-13. What organizational structure has been established to provide for more effective administration of the 3-M system?

1. Work center supervisors work for the 3-M coordinator
2. Group supervisors are assigned to the executive officer
3. The division is divided into work centers
4. The division works for the 3-M coordinator

1-14. Who is normally assigned as group supervisor for the division?

1. Division officer
2. EMO
3. Plans officer
4. LCPO

1-15. Under the 3-M system, maintenance personnel are responsible to what individual?

1. Division officer
2. EMO
3. LCPO
4. Work center supervisor

Learning Objective: Recognize the various aspects of administrative duties in an Electronics Maintenance Division.

1-16. Which of the following administrative duties may be assigned to electronic maintenance division personnel?

1. Supply petty officer
2. Records petty officer
3. Both 1 and 2 above
4. Training petty officer

1-17. What is the best source of information on the proper operation of a piece of office equipment?

1. NAVSHIPS Technical Manual
2. OPNAV Instruction
3. Contractor's technical newsletter
4. Manufacturer's instruction book

1-18. If a combination of Confidential and unclassified material is stored in a folder, how, if at all, should the folder be marked?

1. The folder should be marked Confidential
2. The folder should be marked unclassified
3. It should not be marked

1-19. What is the purpose of a separate record used with a filing system?

1. It is used as a locating guide
2. It provides accountability for classified material
3. It provides a list of supply materials
4. It provides a list of project codes

1-20. The format for a JSNL is contained in what publication?

1. NAVSUP PUB 484
2. OPNAVINST 4790.4
3. SPECINST 4471.77
4. SPECINST 4790.4

Learning Objective: Recognize equipment categories and identify the agencies involved in logistic support.

1-21. A hardware unit that is built by a prime contractor for use in a specific subsystem is what type of equipment?

1. GFE
2. CFE
3. Standard Navy equipment
4. SOSUS-peculiar equipment

1-22. Hardware that is configured by a Government agency acting as prime contractor is referred to as

1. GFE
2. CFE
3. standard Navy equipment
4. SOSUS-peculiar equipment

1-23. Which of the following commands provides logistic support for a new system?

1. CNO
2. TYCOM
3. NAMMSO
4. NESEA

Learning Objective: Recognize the various aspects and uses of the COSAL.

1-24. The COSAL is produced by what command?

1. NESEA
2. SPCC
3. TYCOM
4. NAVELEXSYSCOM

1-25. Which of the following types of information is NOT considered in the preparation of the COSAL?

1. Installed equipment
2. Part failure rate
3. Relative importance of each part
4. Cost of each part

1-26. The COSAL is produced in how many parts?

1. One
2. Two
3. Three
4. Four

1-27. Which of the following information is contained in the SOEAPL?

1. A list of all APLs contained in part II of the COSAL
2. A list of all AELs contained in part II of the COSAL
3. Both 1 and 2 above
4. A list of equipment not covered by the APL

1-28. The SOEAPL contains how many indices?

1. Five
2. Two
3. Three
4. Four

1-29. Information listed in section A of the SOEAPL is listed in what sequence?

1. By service application
2. By equipment nomenclature
3. By equipment identification code
4. By work center code

1-30. Given a part number, what part of the COSAL should you use to locate the stock number?

1. Part I
2. Part II
3. Part III
4. Part IV

1-31. A command's COSAL is based on information contained in what source?

1. Command Configuration Inventory
2. Site Installation Contract
3. SPCC Weapon Systems File
4. NESEA Equipment Inventory

1-32. The SECAS program performs which of the following functions?

1. Provides data to operational managers
2. Verifies accomplishment of specific engineering changes
3. Identifies equipment/components
4. Each of the above

1-33. When equipment is modified, the action is reported on what form?

1. OPNAV Form 4790/CK
2. OPNAV Form 4790/2L
3. NAVSUP Form 1149
4. MAF

Learning Objective: Recognize the sources used to identify and order replacement parts.

1-34. In a technical manual, parts are usually identified by which of the following means?

1. FSC
2. NSN
3. NICN
4. Manufacturer's part number

1-35. What do the first four digits of an NSN represent?

1. NIIN
2. FSC
3. MCRL
4. ML/N

1-36. In Federal supply catalogs, items are arranged in order by

1. NICN
2. NSN
3. FSC
4. NIIN

1-37. Items that are monitored by the Navy Supply System, but are NOT included in the Federal control system are identified by a/an

1. APR
2. PECI
3. NIIN
4. NICN

1-38. What supply document is published on microfiche and is used to cross-reference part numbers to NSNs?

1. COSAL
2. APL
3. MCRL
4. ML/N

1-39. What supply document is used to locate the price and unit of issue for an NSN?

1. COSAL
2. APL
3. MCRL
4. ML/N

1-40. All items in the MCRL are listed in the ML/N.

1. True
2. False

1-41. For a capacitor with MIL/SPEC number CM32D271F, what does the letter F represent?

1. Style
2. Characteristic
3. Capacitance
4. Capacitance tolerance

1-42. What term describes an item listed in the MRIL?

1. Consumable
2. Repairable
3. Equipage
4. Module

1-43. What term describes an administrative item not specifically defined as a repair part?

1. Consumable
2. Repairable
3. Equipage
4. Module

1-44. What system provides a common language for requesting material within the Armed Services?

1. GSA
2. NSA
3. SPCC
4. MILSTRIP

1-45. What form is used by supply personnel to order material that is identified by an NSN and is available from the Navy Supply System?

1. DD Form 1348
2. DD Form 1348-1
3. DD Form 1348-6
4. DD Form 1250

1-46. What form is used to order non-NSN material?

1. DD Form 1348
2. DD Form 1348-1
3. DD Form 1348-6
4. DD Form 1250

1-47. What form is used as a shipping document?

1. DD Form 1348
2. DD Form 1348-1
3. DD Form 1348-6
4. DD Form 1250

1-48. Most of the information for the lower portion of DD Form 1348-6 can be found in what source?

1. NAVSUP Pub 484
2. NAVSUP Pub 485
3. COSAL
4. Technical manual parts list

1-49. When you submit a DD Form 1348-6, what additional form should you submit?

1. NAVSUP Form 1149
2. NAVSUP Form 1250
3. DD Form 1348-6
4. DD Form 1348-1

1-50. Who maintains the division supply log?

1. Supply personnel
2. Division Supply Petty Officer
3. Work center supervisor
4. Division Leading Petty Officer

COURSE DISENROLLMENT

All study materials must be returned. On disenrolling, fill out only the upper part of this page and attach it to the inside front cover of the textbook for this course. Mail your study materials to the Naval Education and Training Program Management Support Activity.

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